

**HEALTH AND SAFETY EXECUTIVE
AGRICULTURE INDUSTRY ADVISORY COMMITTEE**

An ageing agricultural industry - a supplementary paper

Summary

1 This paper should be read in conjunction with the paper AIAC 080701 and supplies additional data of fatal accidents to older workers for the years 1996/97 – 2006/7. Small numbers of deaths mean that differences between age groups are fine and many are not statistically significant. However, the key findings of this analysis show that older workers have a much higher fatal accident rate than younger workers in this sector (paragraph 4) and in addition shows age is a factor in certain types of accident (paragraph 19).

Fatal accidents – is age a factor?

2 Of 439 deaths over the 11 years from 1996/7 – 2006/7, 181 or 41.2% were to workers over the age of 55 (see Tables 4 and 6 in Annex 1).

3 AIAC 080701 noted that accidents that happen to older workers tend to result in more serious injury or death than might be expected when reported incidents by age group were compared to with the proportion working in the industry broken down by age. That paper concluded that this may be linked with physical limitations and a natural decline in vision; hearing and muscular strength coupled with farmers believing that they are capable of more than their body can deliver.

4 **In agriculture the fatal rate (deaths per 100,000 workers) for men aged over 55 is 19.4 compared with 9.4 for age 35 – 54 and 3.7 for those below 35.** Most fatal accidents are to men and an examination of rates of fatal injury to male workers in three grouped age bands in industrial sectors for 2005/6 and 2006/7(p) combined reveals that 44% of fatal accidents to men are to those aged over 55.

5 Tables 1 – 3 summarise the data in three age bands 16-35, 36-55 and over 55. These compare the numbers of fatalities by cause that might be expected were age not a factor and calculate the differences. Those aged over 55 suffer more deaths from vehicle accidents and less drowning than expected if age was not related to the kind of accident. The profile is different for younger workers and those under 35 suffer more machinery and drowning accidents than would be expected.

6 They show that while 41.2% of fatal accidents were to workers aged over 55, the figures for deaths involving moving vehicles and livestock are particularly high. 54% of deaths involving vehicles and 57% of those involving livestock happen to those aged over 55. Accidents involving livestock are common for those aged over 66 (22% of the 87 fatalities).

Fatal accidents to older workers in age bands 56-65, 66-75 and over 75

7 For those aged **56-65** vehicles are the top cause of death (26) and almost on a par are falls (25), closely followed by being struck by a falling of flying object, such as bales (16) (see Table 6 and Chart 1).

8 Of the vehicle accidents the greatest number involved being struck by a vehicle while outside it (16) including 5 deaths when a vehicle was moving forward and 5 involving 'runaway' vehicles that were not being driven. There were also 7 deaths when vehicles overturned and 3 when farmers struck part of a vehicle while travelling in it.

9 Of the falls the bulk were falls from height (18) with just 4 occurring below 2m and 3 on a level.

10 For those aged **66-75** the top cause of death remains moving vehicles (18) followed by livestock (10) and then falls (8) (See Table 6 and Chart 1).

11 The majority of the vehicle accidents again involve being struck whilst outside it (16) including 5 runaway vehicles and 2 deaths during reversing. Overturning incidents drop from 7 in the previous age band to 2.

12 Of the falls most were falls from height (6) and the remainder low falls of less than 2m (2). None occurred on the level.

13 Of the other kinds of accident, contact with machinery is also significant (8).

14 For those aged over **75** there are six causes of death (see Table 6 and Chart 1). The top four are livestock (9), moving vehicles (7), falls (6) and being struck by falling or flying objects, like a bale (4).

15 The vehicle accidents, with one exception involving an overturn, all occurred when the farmer was outside the vehicle. Two incidents involved reversing, which with one exception in the last 11 years, happens only to older workers.

16 Of the falls 3 were falls from height, 2 two low falls of less than 2m and 1 on the level.

17 The number of fatalities in each age band is summarised in Chart 3.

Conclusions

18 These deaths reflect the physically demanding nature of the work undertaken in the agricultural sector and show the variance in the pattern of causality with age. This may be helpful in terms of targeting particular messages at selected age groups. When all age groups over 55 are combined the top four causes of death are vehicle accidents, falls, being struck by a falling or flying object and livestock (see Chart 2).

19 Deaths caused by vehicle accidents, handling livestock and falls occur in greater numbers than would be expected if age was unrelated to cause (see Tables 1, 2 and 3). We can conclude that age is a relevant factor.

20 The pattern of employment status (see Table 5 and Chart 4) shows a not unexpected decline in employee deaths as retirement age is reached and passed. Sampling of the fatal accident report summaries for the years 2005/6 and 2006/7 revealed that within the self employed category 25 of those killed were self employed farmers or partners and 5 self employed contractors. The descriptions given seem to indicate that the self employed farmers killed were still engaged in working the farm as opposed to helping out, with only one or two being described as semi-retired.

Action

21 Members are asked to note the contents of this paper and agree that the data provides justification for the targeting of older workers in this sector with communications campaigns. In the light of the campaign proposals, the action previously identified (see Annex 2) has been overtaken by current plans.

Contact

Samantha Peace
HM Principal Inspector
Agriculture and Food Sector

Annex 1

AGRICULTURE: FATALITIES TO WORKERS; 1996/97 TO 2006/07

Table 1 - Number of fatalities by kind of accident and age band

| | 16-35 | 36-54 | 55+ | All ages |
|----------------|-------|-------|-----|----------|
| Moving Vehicle | 14 | 30 | 51 | 95 |
| Fall Height | 9 | 33 | 39 | 81 |
| Hit by Object | 19 | 25 | 25 | 69 |
| Animals | 4 | 14 | 24 | 42 |
| Machinery | 13 | 10 | 13 | 36 |
| Trapped | 5 | 14 | 12 | 31 |
| Drown& Asphyx | 17 | 17 | 6 | 40 |
| Other | 14 | 20 | 11 | 45 |
| All kinds | 95 | 163 | 181 | 439 |

Table 2 - Numbers of fatalities assuming age is unrelated to kind

| | 16-34 | 35-54 | 55+ | All ages |
|----------------|-------|-------|------|----------|
| Moving Vehicle | 20.6 | 35.3 | 39.2 | 95 |
| Fall Height | 17.5 | 30.1 | 33.4 | 81 |
| Hit by Object | 14.9 | 25.6 | 28.4 | 69 |
| Animals | 9.1 | 15.6 | 17.3 | 42 |
| Machinery | 7.8 | 13.4 | 14.8 | 36 |
| Trapped | 6.7 | 11.5 | 12.8 | 31 |
| Drown& Asphyx | 8.7 | 14.9 | 16.5 | 40 |
| Other | 9.7 | 16.7 | 18.6 | 45 |
| All kinds | 95 | 163 | 181 | 439 |

Table 3 - Difference between raw numbers and expected assuming age unrelated to kind

| | 16-34 | 35-54 | 55+ | All ages |
|----------------|-------|-------|-------|----------|
| Moving Vehicle | -6.6 | -5.3 | 11.8 | 0 |
| Fall Height | -8.5 | 2.9 | 5.6 | 0 |
| Hit by Object | 4.1 | -0.6 | -3.4 | 0 |
| Animals | -5.1 | -1.6 | 6.7 | 0 |
| Machinery | 5.2 | -3.4 | -1.8 | 0 |
| Trapped | -1.7 | 2.5 | -0.8 | 0 |
| Drown& Asphyx | 8.3 | 2.1 | -10.5 | 0 |
| Other | 4.3 | 3.3 | -7.6 | 0 |
| All kinds | 0 | 0 | 0 | 0 |

Table 4 – Number of fatalities by kind of accident and five year age bands – all ages

| Age | Moving vehicles | Falls | Struck by flying or falling object | Livestock | Contact with moving machinery | Trapped by something overturned or collapsed | Drowning /asphyxiation | Other inc. electricity, fire, striking against | Total |
|-------|-----------------|-------|------------------------------------|-----------|-------------------------------|--|------------------------|--|-------|
| 16-20 | 4 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 16 |
| 21-25 | 4 | 2 | 5 | | 4 | 1 | 1 | 4 | 21 |
| 26-30 | 1 | 3 | 2 | 1 | 5 | | 6 | 6 | 24 |
| 31-35 | 5 | 3 | 10 | 1 | 2 | 2 | 8 | 3 | 34 |
| 36-40 | 8 | 3 | 4 | 2 | 4 | 3 | 10 | 4 | 38 |
| 41-45 | 7 | 11 | 8 | 2 | 2 | 5 | 4 | 6 | 45 |
| 46-50 | 7 | 11 | 7 | 8 | 1 | 3 | 2 | 6 | 45 |
| 51-55 | 8 | 8 | 6 | 2 | 3 | 3 | 1 | 4 | 35 |
| 56-60 | 10 | 12 | 8 | 5 | 2 | 4 | 1 | 4 | 46 |
| 61-65 | 16 | 13 | 8 | | 3 | 5 | 1 | 2 | 48 |
| 66-70 | 9 | 6 | 3 | 8 | 6 | 2 | 2 | 4 | 40 |
| 71-75 | 9 | 2 | 2 | 2 | 2 | | 1 | 1 | 19 |
| 76-80 | 4 | 3 | 3 | 6 | | | | | 16 |
| 81-85 | 3 | 3 | 1 | 3 | | 1 | 1 | | 12 |
| Total | 95 | 81 | 69 | 42 | 36 | 31 | 40 | 45 | 439 |

Table 5 – Number of fatalities by age and employment status

| Age | Employee | Self-employed | Total |
|-------|----------|---------------|-------|
| 16-20 | 13 | 3 | 16 |
| 21-25 | 16 | 5 | 21 |
| 26-30 | 11 | 13 | 24 |
| 31-35 | 18 | 16 | 34 |
| 36-40 | 11 | 27 | 38 |
| 41-45 | 16 | 29 | 45 |
| 46-50 | 17 | 28 | 45 |
| 51-55 | 15 | 20 | 35 |
| 56-60 | 13 | 33 | 46 |
| 61-65 | 14 | 34 | 48 |
| 66-70 | 10 | 30 | 40 |
| 71-75 | 1 | 18 | 19 |
| 76-80 | 2 | 14 | 16 |
| 81-85 | | 12 | 12 |
| Total | 157 | 282 | 439 |

| Age | Moving vehicle | Falls | Struck by flying or falling object | Livestock | Contact with moving machinery | Trapped by something overturned or collapsed | Drowning /asphyxiation | Other including electricity, fire, striking against | Total |
|--------------|----------------|-----------|------------------------------------|-----------|-------------------------------|--|------------------------|---|------------|
| 56-60 | 10 | 12 | 8 | 5 | 2 | 4 | 1 | 4 | 46 |
| 61-65 | 16 | 13 | 8 | | 3 | 5 | 1 | 2 | 48 |
| 66-70 | 9 | 6 | 3 | 8 | 6 | 2 | 2 | 4 | 40 |
| 71-75 | 9 | 2 | 2 | 2 | 2 | | 1 | 1 | 19 |
| 76-80 | 4 | 3 | 3 | 6 | | | | | 16 |
| 81-85 | 3 | 3 | 1 | 3 | | 1 | 1 | | 12 |
| Total | 51 | 39 | 25 | 24 | 13 | 12 | 6 | 11 | 181 |

Chart 1 – Number of fatalities by kind of accident in age bands 56-65, 66-75 and over 75

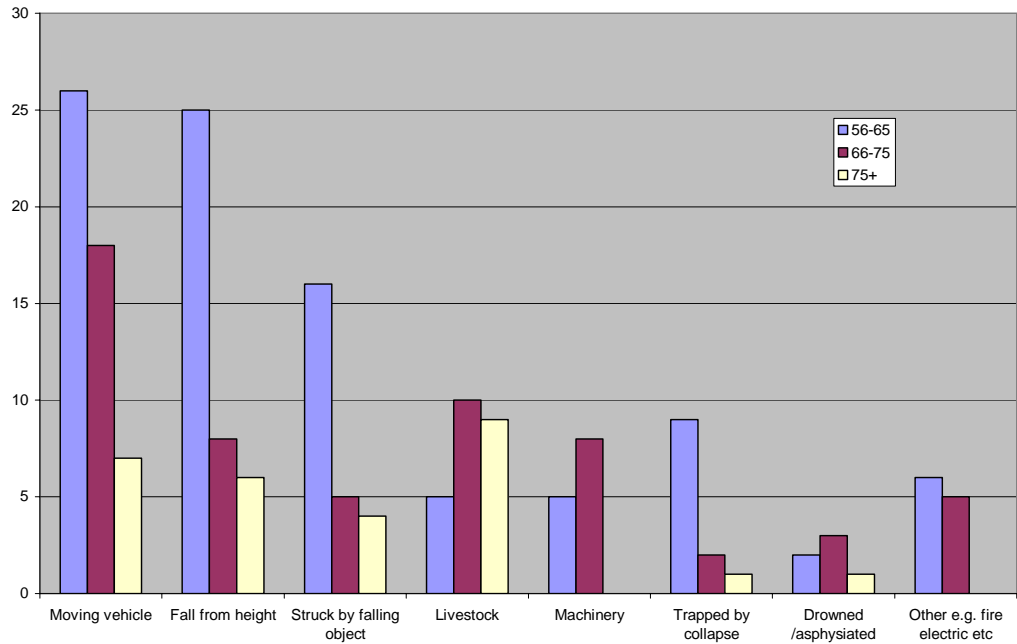


Chart 2 – Number of fatalities by kind of accident for those aged over 55 – all age groups combined

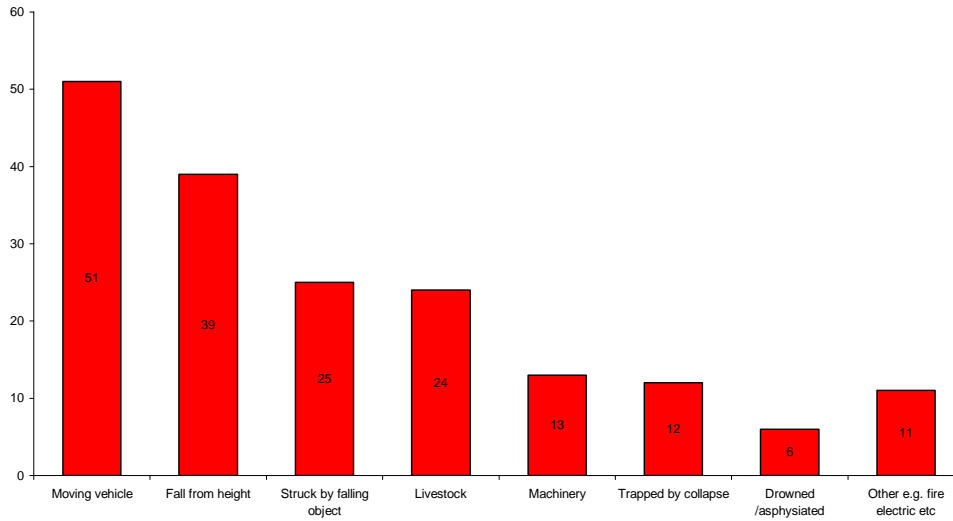


Chart 3 – Number of fatalities by age in age bands 56-65, 66-75 and over 75

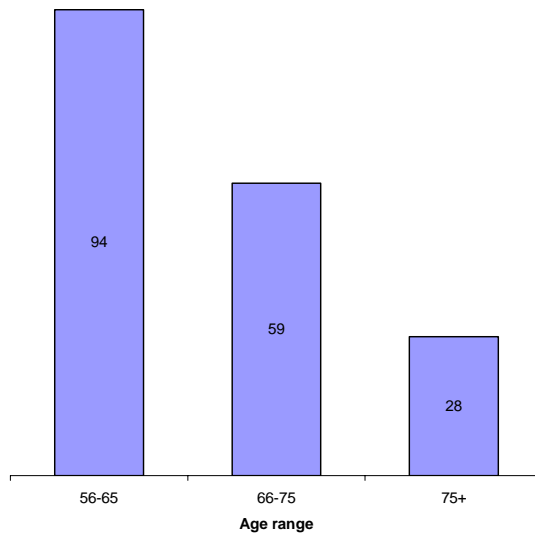
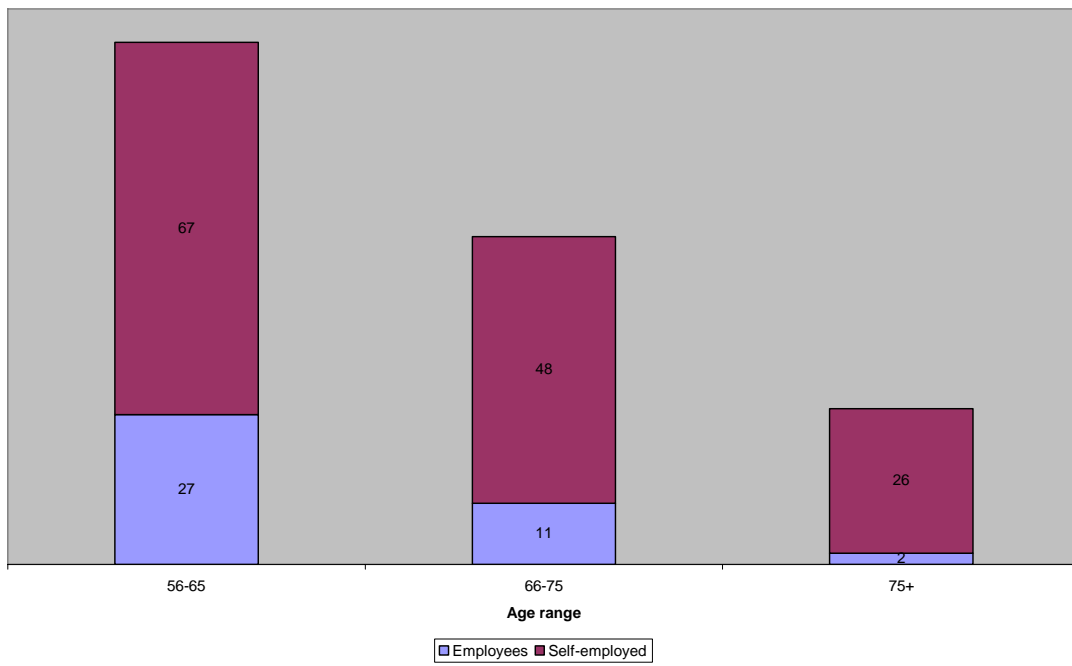


Chart 4 – Number of fatalities by age bands 56-65, 66-75 and over 75 and employment status



Extract from AIAC Paper 080701 – An ageing agricultural industry

18 No special initiatives have as yet been directed by HSE at the injury and ill health incidence rates among older workers in the industry and the work carried out to date is exploratory and should only be considered as indicative.

The Sector suggests:

- To conduct a more detailed analysis of fatal and major injury accidents to the over 50s, to examine the extent to which age is, or might be, a contributory factor
- A comprehensive trawl of national and international data to identify further relevant research
- Exploring the scope for incorporation of questions into future Labour Force Surveys to explore the extent of non-reported injury and ill health to workers and the self-employed in the industry amongst the over 50 age group.

Conclusions

19 As far as the agricultural industry is concerned, the Population Census shows an ageing workforce with proportionately fewer young people and more older people than in other occupational sectors in the Region. The relatively high proportion of older farmers reflects the fact that in many cases these businesses do not have a successor. It is often the case, particularly for tenanted farms, that where there is no successor the farmer cannot afford to retire.

Action

20 Members are asked to:

- (i) consider the problem and the approach suggested in paragraph 18;
- (ii) suggest further actions which could be taken; and
- (iii) Agree a plan of action.

Members are also asked to note the content of this paper as the basis for discussion on the way forward.